## CLAIMS

- 1. A method for inducing differentiation of pluripotent cells comprising the following steps (a) and (b):
- 5 (a) culturing the pluripotent cells in a medium comprising any one of the following growth factors (i) to (iii):
  - (i) acidic fibroblast growth factor, fibroblast growth factor 4, and hepatocyte growth factor;
- (ii) acidic fibroblast growth factor, and growth factor(s) selected from activin A, epidermal growth factor, and  $\beta$ -nerve growth factor; and
  - (iii) fibroblast growth factor 4, and growth factor(s) selected from activin A and hepatocyte growth factor; and,
- (b) culturing the cell cultured in step (a) in a medium 15 comprising oncostatin M.
  - 2. The method according to claim 1, wherein a gelatin-coated culture dish is used in step (a), and a collagen type I-coated culture dish or laminin-coated culture dish is used in step (b).
- 3. The method according to claim 1, wherein a collagen type I-coated culture dish is used.
  - 4. A method for inducing differentiation of pluripotent cells comprising the following steps (a) and (b):
- (a) culturing the pluripotent cells in a medium comprising at least one growth factor selected from retinoic acid, leukemia inhibitory factor, and hepatocyte growth factor; and,
  - (b) culturing the cell cultured in step (a) in a medium comprising any one of the following growth factors (i) to (iii):
- (i) acidic fibroblast growth factor, fibroblast growth30 factor 4, and hepatocyte growth factor;
  - (ii) acidic fibroblast growth factor, and growth factor(s) selected from activin A, epidermal growth factor and  $\beta$ -nerve growth factor; and
- (iii) fibroblast growth factor 4, and growth factor(s)
  35 selected from activin A and hepatocyte growth factor.
  - 5. The method according to claim 3, wherein gelatin-coated

culture dishes are used in steps (a) and (b).

20

- 6. A method for inducing differentiation of pluripotent cells comprising the following steps (a) to (c):
- (a) culturing the pluripotent cells in a medium comprising at least one of the growth factors selected from retinoic acid, leukemia inhibitory factor and hepatocyte growth factor;
- (b) culturing the cell cultured in step (a) in a medium comprising any one of the following growth factors (i) to (iii):
- (i) acidic fibroblast growth factor, fibroblast growth10 factor 4 and hepatocyte growth factor;
  - (ii) acidic fibroblast growth factor, and growth factor(s) selected from activin A, epidermal growth factor and  $\beta$ -nerve growth factor; and
- (iii) fibroblast growth factor 4, and growth factor(s)
  15 selected from activin A and hepatocyte growth factor; and,
  - (c) culturing the cells cultured in step (b) in a medium comprising oncostatin M.
  - 7. The method according to claim 5, wherein gelatin-coated culture dishes are used in steps (a) and (b), and a collagen type I-coated culture dish or laminin-coated culture dish is used in step (c).
  - 8. A method according to any one of claims 1 to 7, wherein the pluripotent cells are derived from a mammal.
- 9. The method according to claim 8, wherein the mammal is a human, monkey, mouse, rat or pig.
  - 10. A method according to any one of claims 1 to 9, wherein the pluripotent cells are embryonic stem cells, adult stem cells, mesenchymal stem cells, or umbilical cord blood cells.
- 11. A method for producing hepatocytes, wherein the method comprises steps (a) and (b) according to any one of claims 1 to 5, or steps (a) to (c) according to claim 6 or 7.
  - 12. The method according to claim 11, wherein the hepatocytes are mature hepatocytes.
- 35 13. The method according to claim 11 or 12, wherein the pluripotent cells are derived from a mammal.

- 14. The method according to claim 13, wherein the mammal is a human, monkey, mouse, rat or pig.
- 15. A method according to any one of claims 11 to 14, wherein the pluripotent cells are embryonic stem cells, adult stem cells, mesenchymal stem cells, or umbilical cord blood cells.
- 16. A hepatocyte produced by a method according to any one of claims 11 to 15.
- 17. A therapeutic agent for a liver disease comprising the 10 hepatocyte according to claim 16.
  - 18. The therapeutic agent according to claim 17, wherein the liver disease is cirrhosis, fulminant hepatitis, biliary atresia, liver cancer, or hepatitis.
    - 19. A kit comprising any one of the following (a) to (c):
- 15 (a) acidic fibroblast growth factor, fibroblast growth factor 4, and hepatocyte growth factor;
  - (b) acidic fibroblast growth factor, and growth factor(s) selected from activin A, epidermal growth factor, and  $\beta$ -nerve growth factor; and
- 20 (c) fibroblast growth factor 4, and growth factor(s) selected from activin A and hepatocyte growth factor.
  - 20. The kit according to claim 19 further comprising oncostatin  $\mathbf{M}$ .
- 21. The kit according to claim 20 further comprising at least one growth factor selected from the group consisting of retinoic acid, leukemia inhibitory factor, and hepatocyte growth factor.